



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/514,141	02/28/2000	Man-Chun Tse	13313	9149
32292	7590	06/16/2004	EXAMINER	
OGILVY RENAULT (PWC) 1981 MCGILL COLLEGE AVENUE SUITE 1600 MONTREAL, QC H3A 2Y3 CANADA			LAO, LUN S	
ART UNIT		PAPER NUMBER		15
2643				
DATE MAILED: 06/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/514,141	TSE ET AL.
	Examiner Lun-See Lao	Art Unit 2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 31 March 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-11 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-11 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### *Introduction*

1. This action is response to the amendment filed on 03/31/2004. Claims 1-11 are pending.

### *Specification*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gliebe (US PAT.5,478,199) in view of Motsinger et al. (US PAT. 3,693,749).

Consider claim 1 Gliebe teaches a method for suppressing noise having a primary tone from a noise source within a duct housing comprising:

modulating the primary tone of the noise (blade pass frequency (BPF)) using the generated exciting sound wave to excite within the duct housing a fluid medium (26) in which a sound wave of the noise propagates so that sound energy of the noise is redistributed from the frequency of the primary tone to a broad range of side bands and the amplitude of the primary tone of the noise is reduced (see col. line 15-col.6 line 67); but Gliebe does not clearly teach that generating an exciting sound wave having a primary frequency generally different from a frequency of the primary tone of the noise.

However Motsinger teaches that generating an exciting sound wave having a primary frequency generally different from a frequency of the primary tone of the noise (see fig.2 and col.4 line 9-col.5 line37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Gliebe into Motsinger to achieve by

modulating the sound energy of the engine with an additional higher frequency sound source as produced by an ultrasonic siren.

Consider claims 2-3, Gliebe teaches the fluid medium is air (see fig.1, 26); and the exciting sound wave is generated by a force of a fluid flow acting on a mechanical device (see fig.1, 30 outlet guide vanes (OGV) or stator vanes) and col.5 lines 15-46).

Consider claim 4, Gliebe teaches a noise attenuation system for suppressing noise having a primary tone from a noise source comprising:

an elongated housing (see fig.1, 10) surrounding the noise source, the housing having a first (26) and second (18) openings on opposite ends, wherein the a sound wave from the noise source propagates in air outwardly towards the first (26) and second (18) openings; and

an exciting sound wave generator (see fig.1, 36a, 36b and 30(outlet guide vanes (OGV) or stator vanes)) associated with the housing, the generator (see fig.1, 36a, 36b and 30(outlet guide vanes (OGV) or stator vanes)) generating an exciting sound wave so that sound energy of the noise is re-distributed from the frequency of the primary tone to a broad range of side bands and the amplitude of the primary tone of the noise is reduced (see col.5 line 15-col.6 line 67); but Gliebe does not clearly teach a primary frequency generally different from a frequency of the primary tone of the noise to excite the air within the housing and modulate the primary tone of the noise.

However, Motsinger teaches a primary frequency generally different from a frequency of the primary tone of the noise to excite the air within the housing and modulate the primary tone of the noise (see fig.2 and col.4 line 9-col.5 line 37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Gliebe into Motsinger to achieve by modulating the sound energy of the engine with an additional higher frequency sound source as produced by an ultrasonic siren.

Consider claims 5-6, Gliebe teaches the exciting sound wave generator (see fig.1, 36a, 36b and 30 (outlet guide vanes (OGV) or stator vanes)) is positioned on an inner wall of the housing; and the exciting sound wave generator comprises a mechanical device (see fig.1,30 and fig.3,30) excited by a force of air flow to generate the exciting sound wave (see col.5 lines 15-46).

Consider claim 7 Gliebe teaches a noise attenuation system for suppressing noise having a primary tone from a jet engine comprising:

a nacelle (see fig.1, 22) surrounding the jet engine (16), the nacelle (22) having an inlet (24b) and an outlet (24c) for receiving and exhausting air flow respectively, wherein a sound wave of the noise produced from the jet engine (16) propagates outwardly towards the inlet (24b) and outlet (24c); and

an exciting sound wave generator (see fig.1, 36a, 36b and 30 (outlet guide vanes (OGV) or stator vanes)) associated with the nacelle (22), so that sound energy of the noise is re-distributed from the frequency of the primary tone to a broad range of side bands and the amplitude of the primary tone of the noise is reduced (see col.5 line 15- col.6 line 67); but Gliebe does not clearly teach that generating an exciting sound wave having a primary frequency generally different from a frequency of the primary tone of the noise to excite the air flow in the nacelle and modulate the primary tone of the noise.

However, Motsinger teaches that generating an exciting sound wave having a primary frequency generally different from a frequency of the primary tone of the noise to excite the air flow in the nacelle (see fig.1,48) and modulate the primary tone of the noise (see fig.2 and col.4 line9-col.5 line 37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Gliebe into Motsinger to achieve by modulating the sound energy of the engine with an additional higher frequency sound source as produced by an ultrasonic siren.

Consider claims 8-9, Gliebe teaches the exciting sound wave generator (see fig.1, 36a, 36b and 30 (outlet guide vanes (OGV) or stator vanes)) is positioned on an inner wall of the nacelle (22) at the inlet; and the exciting sound wave generator (see fig.1, 36a, 36b and 30 (outlet guide vanes (OGV) or stator vanes)) comprises a mechanical device (30) excited by a force of air flow to generate the exciting sound wave (see fig.3, 30 and col.5 lines 15-46).

Consider claims 10-11, Gliebe teaches the mechanical device (see fig.1, 30 and fig.3, 30) comprises a fence member (a plurality of circumferentially spaced apart outlet guide vanes (OGVs), or stator vanes 30 extend radially between outer and inner duct walls 24a,d) exposed to the air flow entering the inlet (24b) of the nacelle (22); and the mechanical device (see fig.1, 30 and fig.3, 30) comprises an aperture defined in the inner wall, an air flow jetting from the aperture into the nacelle (22 and see col.5 lines 15-46).

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nagami (US PAT. 5,293,578) is cited to show other the fan and compressor noise attenuation.

7. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9306

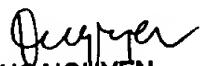
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (703) 305-2259. The examiner can normally be reached on Monday-Friday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (703) 306-0377.

Lao,Lun-See  
Patent Examiner  
US Patent and Trademark Office  
Crystal Park 2  
(703)305-2259

  
DUC NGUYEN  
PRIMARY EXAMINER